

Study of Asian Strongyliini (Coleoptera, Tenebrionidae)

XV. Ten New *Strongylium* Species from Southeast Asia

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Abstract This is the fifteenth part of the study concerning the Asian Strongyliini and deals with ten new species of the genus *Strongylium*, described under the following names: *Strongylium schawallerianum* sp. nov., *S. yunnanatrum* sp. nov., *S. taliopacium* sp. nov., *S. lakhonense* sp. nov., *S. gaoliense* sp. nov., *S. foochouense* sp. nov., *S. stanislavium* sp. nov., *S. tonkinense* sp. nov., *S. harmandi* sp. nov. and *S. kuvani* sp. nov.

This paper is the fifteenth part of my study of the Asian Strongyliini, and deals with species of the genus *Strongylium* from Southeast Asia including China. I am going to describe ten new species.

Major materials were supplied by Dr. Claude GIRARD, Muséum National d'Histoire Naturelle, Paris, Dr. Wolfgang SCHAWALLER, Staatliches Museum für Naturkunde in Stuttgart, and Ing. Stanislav BEČVÁŘ, Institute of Entomology, Czech Academy of Sciences.

Appreciation is due to the above persons who offered me the materials, and also to Mr. Seiji MORITA, Tokyo, for taking photographs. Finally, my deepest thanks should be expressed to Emeritus curator, Dr. Shun-Ichi UENO, National Science Museum (Nat. Hist.), Tokyo, for his constant guidance in my taxonomic studies.

Depositories of the holotypes to be designated are given under each description. The abbreviations used herein are as follows: MNHNP – Muséum National d'Histoire Naturelle, Paris; SMNS – Staatliches Museum für Naturkunde in Stuttgart; NMNHP – National Museum of Natural History, Prag.

Strongylium schawallerianum sp. nov.

(Figs. 1, 11–12)

Almost piceous, with apical parts of antennae, tarsi and mouth parts brownish; dorsal surface moderately and feebly sericeously shining, ventral surface rather alutaceous. Body elongate, longitudinally convex.

Head subdecagonal, covered with isodiametric microsculpture; clypeus widely semicircular, weakly concave in basal part, flattened in middle, bent ventrad in apical part, closely punctate, each puncture with a minute bent hair, fronto-clypeal border

widely U-shaped and finely impressed; genae below eyes strongly raised laterad, sparsely punctulate in inner parts, closely punctulate in outer parts, with outer margins rounded; frons narrowly T-shaped, steeply inclined anteriad, coarsely rugoso-punctate, interocular space very narrow; vertex weakly convex, closely, irregularly punctate, with a longitudinal impression medially. Eyes very large, subreniform in dorsal view, rather strongly convex laterad, broadly, slightly obliquely inlaid into head. Antennae subfiliform, extending beyond basal 1/4 of elytra, each segment weakly dilated apicad, ratio of the length from basal to apical segments: 0.98, 0.26, 1.24, 1.14, 1.12, 0.98, 0.92, 0.88, 0.88, 0.82, 0.90.

Pronotum subquadrate, slightly wider than long (6:5), widest at the middle and base; apex sublinear, rimmed, the rim becoming narrower laterad, minutely punctate; base weakly bisinuous, more strongly bordered and rimmed than apex, the rim impunctate in anterior part, finely punctulate in posterior part; sides steeply inclined, weakly rounded laterad, finely bordered from prosternum, though the borders are not visible from above; front angles rounded and bordered, hind angles subrectangular; disc moderately convex, impressed along the medial line and at basal 1/3 on each side, covered with isodiametric microsculpture, rather closely punctate, each puncture with a minute bent hair. Scutellum sublinguiform, feebly elevated, covered with isodiametric microsculpture, irregularly scattered with microscopic punctures.

Elytra elongated subfusiform, 2.3 times as long as wide, 4.7 times the length and 1.62 times the width of pronotum; dorsum longitudinally convex; disc punctato-striate, the stria punctures small and closely set in interior part, larger and sparser in lateral and posterior parts, with 5th striae reaching base; intervals rather strongly raised, covered with isodiametric microsculpture, scattered with microscopic punctures, weakly, transversely aciculate; humeri gently swollen; apices rounded.

Fifth abdominal (anal) sternite covered with isodiametric microsculpture, closely scattered with microscopic punctures, finely pubescent, with apical part weakly concave in male. Legs slender; male protibia gently curved ventrad, with ventral face slightly gouged and haired in apical half; male metatibia very weakly twisted, with interior face slightly gouged and haired in apical 3/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.48, 0.25, 0.24, 0.26, 1.63; 2.05, 0.96, 0.84, 0.62, 1.88; 2.37, 0.94, 0.78, 1.95.

Male genitalia elongated subfusiform, 3.88 mm in length, 0.71 mm in width, gently curved in lateral view, with basal piece 2.38 mm in length; fused lateral lobes 1.63 mm in length, irregularly scattered with minute punctures on dorsal surface, and acutely prolonged apicad.

Body length: 22.0 mm.

Holotype: ♂, "615 NEPAL: Dolakha Distr. / lower Khare Khola / 1200 m, 3–4. VI. 2000 / leg. W. SCHAWALLER" (SMNS). Paratypes: 6 exs., same data as for the holotype; 1 ex., "H^{te}. Birmanie / Mines des Rubis / 1200 m–2300 m / Doherty 1880 // MUSÉUM PARIS / 1952 / COLL. R. OBERTHUR" (MNHNP).

Notes. The new species resembles *Strongylium atricolor* PIC, 1922, originally de-

scribed from Tonkin, but can be distinguished from the latter by the clypeus more noticeably protruded apicad, the head and pronotum more strongly but sparsely punctate, the pronotum more noticeably grooved along the median line, the scutellum more strongly punctulate, and elytral intervals more clearly aciculate. This new species also resembles *S. opacicolle* FAIRMAIRE, 1891, from China, "Mou-pin", but can be distinguished from the latter by the antennae bolder, punctures on the head and pronotum larger and sparser, and the elytral striae and punctures deeper.

The specific name is given after Dr. Wolfgang SCHAWALLER, who collected the specimens of the type series.

Strongylium yunnanatrum sp. nov.

(Figs. 2, 13–14)

Brownish black, with claws, mouth parts and gula rather brown, hairs on ventral sides of legs yellowish brown; dorsal surface moderately, feebly sericeously shining, ventral surface wholly alutaceous; each surface almost glabrous. Body rather elongate; convex longitudinally.

Head widely subdecagonal, covered with isodiametric microsculpture, closely, irregularly punctate, each puncture with a minute bent hair; clypeus transversely subquadrate, flattened in basal part, gradually inclined medially, strongly bent ventrad in front, fronto-clypeal border widely curved and impressed; genae raised outwards, scattered with fine punctures, with obtuse outer margins; frons T-shaped and finely ridged, with an irregularly punctate impression between posterior parts of eyes. Eyes large and subreniform in dorsal view, more strongly convex laterad, obliquely inlaid into head. Antennae subfiliform, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.80, 0.22, 1.03, 1.02, 0.93, 0.91, 0.88, 0.89, 0.79, 0.77, 0.89.

Pronotum wider than long (5:4), roundly narrowed anteriad, convex laterad in middle, and feebly sinuous before base; apex nearly straight, finely ridged, the ridge tapering laterad, scattered with small punctures; base strongly bordered and boldly ridged, the ridge almost impunctate on anterior slope, finely punctulate in posterior part; sides steeply declined to lateral margins, which are separated from ventral parts by borders and ridges; front angles rounded and visible from above, hind angles weakly angulate; disc moderately convex, covered with isodiametric microsculpture, rather closely punctate, though the punctures are not fused with one another, shallowly grooved and impunctate along median line, with a pair of large impressions at basal 1/3. Scutellum sublinguiform, slightly convex, scattered with small punctures in lateral portions.

Elytra 2.36 times as long as wide, 4.55 times the length and 1.46 times the width of pronotum, widest at apical 1/3, feebly sinuous in basal 1/3; dorsum rather strongly convex, highest at basal 2/5; disc punctato-striate, the punctures in striae rather dense, 1st and 2nd striae connected with each other close to base; intervals gently convex, covered with isodiametric microsculpture, scattered with microscopic punctures, trans-

versely micro-aciculate; humeri gently swollen; apices feebly, roundly produced.

Fifth abdominal sternite covered with isodiametric microsculpture, closely scattered with microscopic punctures, finely pubescent, weakly, elliptically concave in male. Legs slender; male protibia almost straight, with ventral face slightly gouged and haired in apical 2/5; male metatibia weakly twisted, with interior face weakly gouged and haired in middle; ratios of the lengths of pro-, meso- and metatarsomeres: 0.37, 0.31, 0.33, 0.35, 1.63; 2.26, 1.02, 0.78, 0.64, 1.63; 2.31, 0.91, 0.88, 1.61.

Male genitalia elongated subfusiform, a little more than 3.80 mm in length (apices lost in the holotype), 0.62 mm in width, feebly curved in lateral view, with basal piece 2.51 mm in length; dorsal surface of fused lateral lobes irregularly scattered with small punctures.

Body length: 21.0 mm.

Holotype: ♂, "Chine/Yunnan/Recu de Lou-Nan/1931//MUSÉUM PARIS/1952/COLL. R. OBERTHUR" (MNHNP). Paratypes: 11 exs., same data as for the holotype; 1 ex., "Muséum Paris/Yunnan/160 km E de Yunnan Fou/(Père Souyris)/P. CUERRY 1924//DÉCEMBRE"; 2 exs., "Yunnan/(Cuerry)//Muséum Paris/Coll. M. PIC".

Notes. This new species closely resembles *Strongylium atricolor* PIC, 1922 from Tonkin, but can be distinguished from the latter by the eyes in male more strongly convex laterad and approximate with each other (interocular space narrower), the pronotum narrower in the anterior part and less strongly grooved along median line, the scutellum more densely punctate, and the elytral intervals less strongly convex.

This new species is a member of the group of *Strongylium carbonarium* GEBIEN, 1913, which contains *S. atricolor* PIC, 1922, *S. doisuthepense* MASUMOTO, 1996, and so on.

Strongylium taliopacium sp. nov.

(Figs. 3, 15–16)

Piceous, with apical parts of antennae, mouth parts and gula brownish, dorsal surface weakly, somewhat sericeously shining, ventral surface rather alutaceous; each surface almost glabrous. Body elongated subfusiform, longitudinally convex.

Head subdecagonal, covered with isodiametric microsculpture; clypeus semicircular, inclined anteriad, gently produced in apical part, bent ventrad in front, fronto-clypeal border unclear; genae obliquely, strongly raised outwards, scattered with small punctures, with rounded outer margins; frons T-shaped and weakly ridged, impunctate in anterior part, coarsely, closely punctate in middle (the interocular space), diatone about 1/12 times the width of transverse diameter of an eye; vertex with a rather deep median impression. Eyes subreniform in dorsal view, strongly convex laterad, obliquely inlaid into head. Antennae subfiliform, feebly becoming bolder apicad, ratio of the length of each segment from base to apex: 0.65, 0.21, 1.32, 0.91, 0.85, 0.88,

0.71, 0.68, 0.65, 0.61, 0.78.

Pronotum short barrel-shaped in dorsal view, 1.18 times as wide as long, widest at the middle, noticeably sinuous before base; apex sublinear, finely rimmed, the rim sparsely scattered with minute punctures; base boldly rimmed, the rim more closely scattered with minute punctures than apical one; sides convex laterad, steeply inclined laterad, bordered from ventral side by fine rims; front angles rounded, hind angles rather acutely protruded obliquely posteriad; disc moderately convex, covered with isodiametric microsculpture, rather closely, irregularly scattered with strong punctures, which are often fused with one another, shallowly grooved along median line (the groove narrowly impunctate in posterior half), deeply impressed along base, with a pair of ovate impressions at basal 1/3, and also with an oblique impression close to base on each side. Scutellum subequilateral triangular, very feebly convex, covered with isodiametric microsculpture, sparsely, irregularly scattered with small punctures in lateral parts.

Elytra elongated subfusiform, 2.32 times as long as wide, 4.39 times the length and 1.58 times the width of pronotum, widest slightly before the middle; dorsum longitudinally convex, highest at basal 1/4; disc rather deeply but finely punctato-striate, the punctures in striae small; intervals rather strongly convex, covered with isodiametric microsculpture, scattered with shallow microscopic punctures, rather noticeably, transversely micro-aciculate; humeri gently swollen; apices rounded.

Male anal sternite slightly depressed in apical part, with apex feebly produced. Legs slender; male protibia nearly straight, with ventral side gouged and haired in middle; male metatibia very weakly twisted, with interior side very weakly gouged and haired in medial part, ratios of the lengths of pro-, meso- and metatarsomeres: 0.61, 0.33, 0.31, 0.34, 1.52; 2.02, 0.90, 0.77, 0.67, 1.69; 2.62, 0.89, 0.66, 1.79.

Male genitalia subfusiform, 3.3 mm in length, 0.64 mm in width; fused lateral lobes elongated triangular, 1.60 mm in length, with apices noticeably prolonged.

Body length: 20.5–22.0 mm.

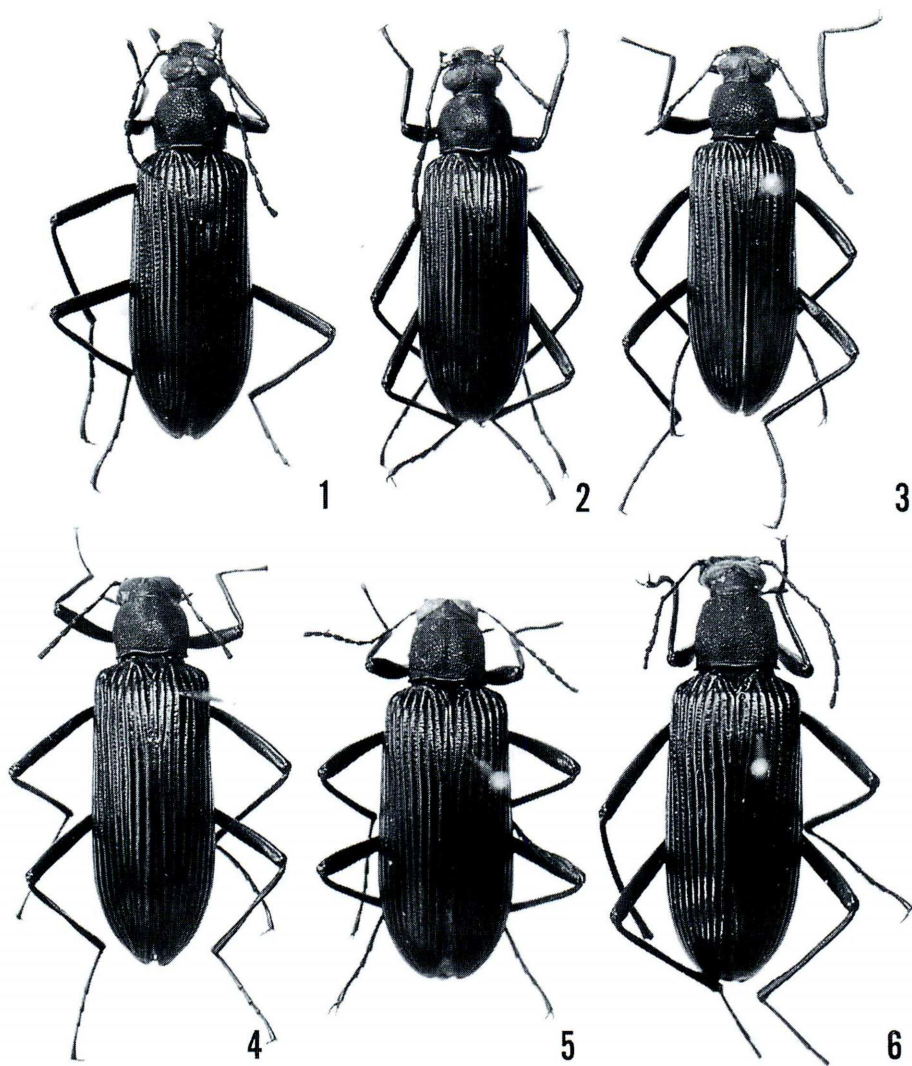
Holotype: ♂, "Tali / Haut Yunnan // Muséum Paris / Coll. M. Pic" (MNHNP). Paratypes: 3 exs., same data as for the holotype.

Notes. This new species resembles *Strongylium opacicolle* FAIRMAIRE, 1891, originally described from China (Mou-pin) in having the blackish body with the similarly shaped male genitalia, but can be distinguished from the latter by the head and pronotum less closely punctate, and the ventral side of male protibia obviously gouged.

Strongylium lakhonense sp. nov.

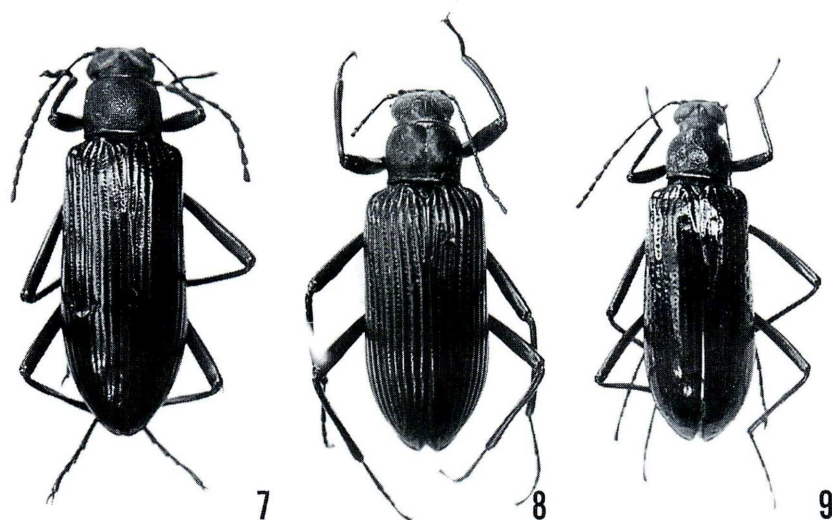
(Figs. 4, 17–18)

Piceous, with major basal parts of femora lighter in colour, hairs on ventral surface of legs yellowish brown, head and pronotum sericeous and almost mat, scutellum and elytra sericeously shining, ventral surface alutaceous; each surface almost glabrous. Body elongate, convex longitudinally.



Figs. 1–6. Habitus of *Strongylium* spp. from Southeast Asia. — 1, *S. schawallerianum* sp. nov., holotype, ♂; 2, *S. yunnanatrum* sp. nov., holotype, ♂; 3, *S. taliopacium* sp. nov., holotype, ♂; 4, *S. lakhonense* sp. nov., holotype, ♂; 5, *S. gaoliense* sp. nov., holotype, ♂; 6, *S. foochouense* sp. nov., holotype, ♂.

Head subdecagonal, covered with isodiametric microsculpture; clypeus semicircular, flattened in basal part, steeply inclined anteriorly, bent ventrad and truncate in front, fronto-clypeal border widely curved and finely sulcate; genae obliquely raised, rather sparsely scattered with small punctures, areas before eyes coarse; frons somewhat T-shaped, steeply inclined anteriorly, almost vertical in front, interocular space



Figs. 7–9. Habitus of *Strongylium* spp. from Southeast Asia. — 7, *S. stanislavium* sp. nov., holotype, ♂; 8, *S. tonkinense* sp. nov., holotype, ♂; 9, *S. harmandi* sp. nov., holotype, ♂.

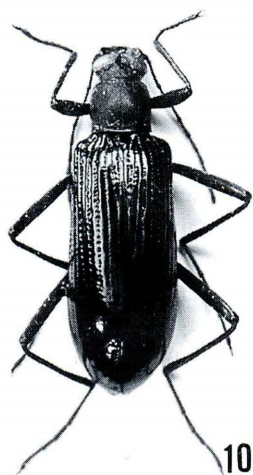


Fig. 10. Habitus of *Strongylium kuvani* sp. nov., holotype, ♂.

about 1/10 the transverse diameter of an eye, area between posterior part of frons and vertex longitudinally, rather strongly impressed. Eyes rather transverse, subreniform in dorsal view, strongly convex laterad, obliquely inlaid into head. Antennae presumably subfiliform, though three apical segments are lost in the holotype, each feebly becoming bolder apicad, ratio of the length of each segment from base to apex: 0.61, 0.23, 1.26, 1.22, 1.03, 0.93, 0.91, 0.82, —, —, —.

Pronotum slightly transverse (5 : 4), roundly produced laterad, gently sinuous near base; apex sublinear, rimmed, the rim minutely punctulate and tapering laterad; base gently bisinuous, bordered and ridged, the ridge rather closely, minutely punctulate in basal part, tapering laterad; sides rather steeply declined to lateral margins, which are finely ridged, though the ridges are not visible from above; front angles rounded, hind angles rather acute; disc gently convex, covered with isodiametric microsculpture, rather closely, irregularly punctate, vaguely grooved along median line, with pairs of impressions at the middle and basal 1/4. Scutellum subequilateral triangular with slightly rounded sides, feebly elevated posteriad, covered with isodiametric microsculpture, scattered with shallow punctures, which are connected by very shallow grooves.

Elytra elongated subfusiform, about 2.54 times as long as wide, 4.71 times the length and 1.48 times the width of pronotum, widest at apical 3/8, feebly sinuous at basal 1/4; dorsum rather strongly convex, highest slightly before the middle; disc punctato-striate, the punctures in striae small and closely set; intervals strongly convex, covered with isodiametric microsculpture, scattered with microscopic punctures, transversely, finely aciculate, 1st stria and 2nd, and 3rd and 4th connected with each other close to base, 5th reaching base; humeri weakly convex; apices roundly produced.

Male anal sternite weakly, subelliptically depressed in apical part, rounded at apex. Legs slender; male protibia almost straight, with ventral face weakly gouged and haired in apical 3/5; male metatibia noticeably twisted in middle, with interior face gouged and haired in medial part; ratios of the lengths of pro-, meso- and metatarsomeres: 0.42, 0.24, 0.23, 0.26, 1.58; 2.21, 1.07, 0.79, 0.61, 1.64; 2.53, 1.11, 0.78, 1.74.

Male genitalia elongate, 4.48 mm in length and 0.63 mm in width, gently curved in lateral view; fused lateral lobes elongated triangular, 1.84 mm in length, feebly concave along medial line, with acute apices.

Body length: 10-11 mm.

Holotype: ♂, "Muséum Paris/Lakhon/HARMAND 1878" (MNHNP). Paratypes: 2 exs., same data as for the holotype.

Notes. In general features, this new species rather resembles *Strongylium atricolor* PIC, 1922 from Tonkin, but can be distinguished from the latter by the frons steeply inclined anteriad, the pronotum more closely and evenly punctate, stria punctures on the elytra finer, and the male genitalia longer.

Strongylium gaoliense sp. nov.

(Figs. 5, 19-20)

Piceous, with apical segments of antennae, mouth parts and tarsi feebly brownish; head, pronotum (except for apex and base), and posterior part of elytra weakly, sericeously shining, apex and base of pronotum, scutellum and anterior part of elytra

moderately, somewhat sericeously shining; ventral surface rather alutaceous; each surface almost glabrous. Body rather elongate, longitudinally convex.

Head subdecagonal, covered with isodiametric microsculpture; clypeus semicircular, steeply inclined anteriad and rugoso-punctate in posterior part, produced ventrad and closely, finely punctulate in anterior part, fronto-clypeal border not defined; genae obliquely, strongly raised outwards, rather closely scattered with small punctures, with rounded outer margins; frons somewhat Y-shaped, weakly ridged and rugulose between eyes, diatone about 1/18 times the width of transverse diameter of an eye; vertex rugoso-punctate, with a deep medial impression. Eyes large and approximate with each other, strongly convex laterad, broadly, obliquely inlaid into head. Antennae subfiliform, feebly becoming bolder apicad, ratio of the length of each segment from base to apex: 0.88, 0.21, 1.28, 0.99, 0.89, 0.91, 0.69, 0.66, 0.53, 0.46, 0.58.

Pronotum subquadrate in dorsal view, wider than long (5:4), widest at the middle, gently sinuous before base; apex sublinear, finely rimmed, the rim sparsely scattered with minute punctures; base gently sinuous on each side, rimmed, the rim being bolder than the apical one, more closely scattered with minute punctures; sides gently convex laterad, steeply inclined laterad, bordered from ventral side by fine rims; front angles rounded, hind angles rather acutely protruded obliquely posteriad; disc moderately convex, covered with isodiametric microsculpture, rather strongly, closely scattered with strong punctures, which are often fused with one another, sparsely intermixed with minute punctures, shallowly grooved along median line, with pairs of impressions at basal 1/3 and obliquely close to base. Scutellum subequilateral triangular, gently raised posteriad, feebly covered with isodiametric microsculpture, irregularly scattered with small, somewhat ovate punctures, with an impunctate area in medial part.

Elytra elongated subfusiform, 2.34 times as long as wide, 4.71 times the length and 1.69 times the width of pronotum, widest slightly behind the middle; dorsum longitudinally convex, highest at basal 1/4; disc punctato-striate, the striae punctures small but notching intervals in anterior part, becoming smaller posteriad; intervals covered with isodiametric microsculpture and transversely micro-aciculate, rather strongly convex in anterior part, becoming weaker posteriad, scattered with microscopic punctures in anterior part; humeri gently swollen; apices rounded.

Male anal sternite slightly concave in apical part, with rounded apex. Legs slender; male protibia nearly straight, with ventral side haired in apical half; male metatibia feebly curved, with interior side very weakly gouged and finely haired in apical 2/5, ratios of the lengths of pro-, meso- and metatarsomeres: 0.53, 0.33, 0.35, 0.34, 1.56; 2.18, 0.87, 0.73, 0.59, 1.72; 2.49, 1.02, 0.68, 1.67.

Male genitalia subfusiform, 3.37 mm in length, 0.73 mm in width; fused lateral lobes elongated triangular, 2.21 mm in length, with prolonged and boldly nib-shaped apices.

Body length: 21.5 mm.

Holotype: ♂, "CH, Yunnan 14-21.6.93 / 100 km W of Baoshan / GAOLIGONG-

SHAN NAT. RES. / E. Lendek, O. Sausa leg.", Coll. S. BEČVÁŘ (NMNHP).

Notes. The nearest named species to this new *Strongylium* might be *S. yunnanicum* MASUMOTO, 1999, originally described from Gaoligongshan, China, but can be distinguished from the latter by the head and pronotum less closely rugoso-punctate, the interocular space narrower (0.29 times the width of an eye diameter in *S. yunnanicum*), the scutellum subequilateral triangular (sublinguiform in *S. yunnanicum*), the elytral intervals noticeably transversely micro-aciculate, and the male genitalia subfusiform with noticeably prolonged and boldly nib-shaped apices (fusiform with simply acute apices in *S. yunnanicum*).

Strongylium fochouense sp. nov.

(Figs. 6, 21–22)

Piceous, with mouth parts, gula and claws lighter in colour, hairs on ventral surface of legs yellowish brown; head and pronotum sericeous and almost mat, scutellum and elytra sericeously shining, ventral surface alutaceous; each surface almost glabrous. Body elongate, convex longitudinally.

Head subdecagonal, covered with isodiametric microsculpture; clypeus transversely subhexagonal, gently inclined anteriad, bent ventrad and truncate in front, closely punctate, the punctures becoming finer anteriad, fronto-clypeal border finely sulcate, nearly straight widely in middle, obliquely bent in lateral parts and reaching outer margins; genae obliquely raised, closely scattered with small punctures, areas before eyes sparsely punctate and rather coarse; frons T-shaped, rather steeply inclined anteriad, irregularly punctate, interocular space about 1/8 the transverse diameter of an eye, with a weak rather longitudinal impression between posterior parts of eyes. Eyes rather transverse, subreniform in dorsal view, strongly convex laterad, obliquely, roundly inlaid into head. Antennae subfiliform, reaching basal 1/5 of elytra, each segment becoming bolder apicad, ratio of the length of each segment from base to apex: 1.03, 0.23, 1.79, 1.31, 1.29, 1.21, 1.13, 0.87, 0.78, 0.75, 0.87.

Pronotum slightly transverse (10 : 9), narrowed anteriad, sinuous before base, covered with isodiametric microsculpture; apex feebly produced anteriad, rimmed, the rim minutely punctate and tapering laterad; base weakly bisinuous, bordered and ridged, the ridge tapering laterad, almost impunctate on anterior slope, rather closely, minutely punctate on basal slope; sides roundly produced laterad, rather steeply declined to lateral margins, which are finely bordered in anterior 1/4; front angles obtusely angulate, hind angles acute and protruded in dorsal view; disc gently convex, closely, coarsely punctate, the punctures fused with one another in antero-medial part, vaguely grooved along median line, with a pair of impressions at basal 2/5. Scutellum subequilateral triangular, feebly depressed in antero-medial part, weakly elevated postero-laterad, feebly covered with isodiametric microsculpture, and sparsely scattered with small, somewhat ovate punctures.

Elytra elongated subfusiform, about 2.43 times as long as wide, 3.78 times the length and 1.40 times the width of pronotum, widest slightly before the middle, feebly sinuous at basal 1/3; dorsum rather strongly convex, highest slightly before the middle; disc punctato-striate, the striae rather wide, the punctures in striae small at the bottom and rather closely set in interior and posterior parts, those in lateral parts becoming larger and rather foveate; intervals strongly convex, covered with isodiametric microsculpture, scattered with microscopic punctures, transversely, finely aciculate, 1st stria and 2nd connected near base, 5th almost reaching base; humeri moderately convex; apices roundly produced.

Male anal sternite transversely, elliptically depressed in apical part, rounded at apex. Legs slender; male protibia almost straight, with ventral face very slightly gouged and haired in anterior half; male metatibia twisted, with interior face weakly gouged and haired in medial part; ratios of the lengths of pro-, meso- and metatarsomeres: 0.78, 0.37, 0.39, 0.53, 1.59; 3.02, 1.28, 1.01, 0.78, 1.81; 3.58, 1.36, —, —.

Male genitalia subfusiform, 3.74 mm in length and 0.81 mm in width, gently curved in lateral view; fused lateral lobes triangular, 1.63 mm in length, scattered with microscopic punctures on dorsal surface, with strongly prolonged apices.

Body length: 23.5–2.65 mm.

Holotype: ♂, "Foochou//Muséum Paris/Coll. M. Pic" (MNHNP). Paratypes: 1 ex., "Fokien//Muséum Paris/Coll. M. Pic"; 1 ex., "Coll. A. v. d. Trappen, Stuttgart/Pojang/China" (SMNS).

Notes. This new species somewhat resembles *Strongylium longurium* FAIRMAIRE, 1903 from Tonkin, but can be distinguished from the latter by the larger and wider body with eyes more strongly convex laterad, the pronotum more closely rugoso-punctate, and the legs not brownish.

***Strongylium stanislavium* sp. nov.**

(Figs. 7, 23–24)

Piceous, with tarsi, claws and mouth parts lighter in colour, hairs on ventral surface of legs yellowish brown, head and pronotum weakly, sericeously shining, scutellum and elytra gently, feebly sericeously shining, ventral surface rather alutaceous; each surface almost glabrous. Body elongate, convex longitudinally.

Head slightly widely subdecagonal, weakly covered with isodiametric microsculpture; clypeus transverse, flattened and closely punctate in basal part, gently inclined anteriad, rather sparsely punctate in middle, bent ventrad and closely, finely punctate in front, fronto-clypeal border very weakly curved; genae obliquely raised, irregularly scattered with small punctures, areas before eyes coarse; frons finely ridged in somewhat T-shape, closely punctate, steeply inclined anteriad, almost vertical along the border of fronto-clypeal border, interocular space about 1/20 the transverse diameter of an eye, with an impression at the area between posterior parts of eyes. Eyes rather transversely subreniform in dorsal view, strongly convex laterad, obliquely inlaid

into head. Antennae rather boldly subfiliform, each segment feebly becoming bolder apicad, ratio of the length of each segment from base to apex: 0.83, 0.23, 1.26, 1.14, 0.98, 1.02, 0.94, 0.96, 0.91, 0.89, 0.97.

Pronotum subquadrate, wider than long (5:4), widest at the middle, gently produced laterad, feebly sinuous near base, weakly covered with isodiametric microsculpture; apex slightly produced, rimmed, the rim minutely punctulate and tapering laterad; base gently bisinuous, strongly bordered and ridged, the ridge almost impunctate on anterior slope, rather closely, minutely punctate on posterior slope, tapering laterad; sides steeply declined to lateral margins, which are clearly ridged though the ridges are not visible from above; front angles rounded, hind angles subrectangular; disc gently convex, rather closely, punctate, each puncture with a small granule and minute bent hair at the centre, vaguely grooved along median line in middle, with pairs of impressions at basal 1/3 and close to base. Scutellum subcordate with rather acute apex, feebly raised posteriad, weakly covered with isodiametric microsculpture, scattered with somewhat ovate punctures in lateral parts, each with a microscopic bent hair.

Elytra elongated subfusiform, about 2.36 times as long as wide, 4.71 times the length and 1.56 times the width of pronotum, widest at apical 3/5, feebly sinuous at basal 3/8; dorsum rather strongly convex, highest slightly before the middle; disc punctato-striate, the punctures in striae small but notching intervals; intervals rather strongly convex in anterior parts, covered with isodiametric microsculpture, scattered with microscopic punctures, finely, transversely, aciculate, 1st and 2nd striae connected with each other close to base, 5th almost reaching base; humeri rather strongly convex; apices weakly, roundly produced.

Male anal sternite covered with isodiametric microsculpture, scattered with microscopic punctures, finely pubescent, very feebly depressed in apical part, with rounded apex. Legs rather stout; male protibia gently curved ventrad, with ventral face weakly gouged and haired in apical 3/5; male metatibia twisted in middle, with interior face gouged and haired in medial part; ratios of the lengths of pro-, meso- and metatarsomeres: 0.47, 0.35, 0.38, 0.36, 1.38; 2.04, 0.97, 0.78, 0.59, 1.68; 2.41, 1.00, 0.78, 1.72.

Male genitalia elongate, 3.82 mm in length and 0.78 mm in width, gently curved in lateral view; fused lateral lobes elongated triangular, 1.72 mm in length, scattered with microscopic punctures in lateral parts, with acute apices.

Body length: 21.2 mm.

Holotype: ♂, "YUNNAN 1500–2500 m / 25.22N 98.49E 17–24/5 / GAOLIGONG mts / Vít Kubáň leg. 1955 // COLLECTION STANISLAV BEČVÁŘ" (NMNSP).

Notes. In general features, this new species closely resembles *Strongylium gaoliense* sp. nov., but can be distinguished from the latter by the body bolder, with the head and pronotum less coarsely, closely punctate, the pronotum wider with the apex bolder, the elytra more clearly punctato-striae, intervals not transversely aciculate but simply punctulate, and the male genitalia larger and slenderer.

Strongylium tonkinense sp. nov.

(Figs. 8, 25–26)

Head and pronotum (except for basal part) piceous, apical halves of antennae, basal part of pronotum, elytra, metafemora, and meso- and metatibiae brownish black, claws dark reddish brown; dorsal surface weakly, sericeously shining, anterior half of ventral side sericeous and rather mat, posterior part of ventral side alutaceous and gently shining; each surface almost glabrous. Body oblongo-ovate; rather strongly convex ventrad.

Head subdecagonal, weakly covered with isodiametric microsculpture; clypeus semicircular, rather closely scattered with small punctures, gently inclined anteriad, weakly concave and transversely impressed in basal 1/3, bent ventrad in front, fronto-clypeal border moderately curved and rather strongly impressed; genae obliquely, moderately raised, scattered with microscopic punctures, with rounded outer margins; frons somewhat T-shaped, almost impunctate in anterior part, closely, minutely punctulate in posterior part, gently inclined anteriad, steeply so before fronto-clypeal border, with a shallow impression at the middle, diatone about 2/9 times the width of transverse diameter of an eye; vertex with a longitudinal impression along median line, areas behind eyes obliquely grooved. Eyes rather large, moderately convex laterad, obliquely inlaid into head. Antennae presumably subfiliform though two apical segments are lost in the holotype, ratio of the length of each segment from base to apex: 0.78, 0.23, 1.28, 1.04, 0.96, 0.94, 0.86, 0.88; 0.79, —, —.

Pronotum slightly wider than long, widest at apical 2/5, weakly covered with isodiametric microsculpture; apex sublinear, raised in wide triangular, sparsely scattered with microscopic punctures; base gently sinuous in lateral parts, bordered and ridged, almost impunctate in medial part; front angles obtusely angulate, hind angles acutely projected postero-laterad in dorsal view; sides gently inclined and rounded laterad, bordered by fine ridges in anterior 1/3; disc gently convex, covered with isodiametric microsculpture, sparsely scattered with microscopic punctures, shallowly grooved along median line, with pairs of spot-like impressions slightly after the middle and basal 1/3, and also with a pair of oblique impressions close to base. Scutellum widely sublinguiform, feebly elevated, covered with isodiametric microsculpture, sparsely scattered with shallow, microscopic punctures.

Elytra subcylindrical, 2.12 times as long as wide, 4.58 times the length and 1.66 times the width of pronotum, widest at apical 3/8, slightly narrowed at basal 1/3; dorsum rather strongly convex, highest at basal 3/8; disc covered with isodiametric microsculpture, punctato-striate, the striae rather wide, the strial punctures rather deep, those in interior parts small and closely set, those in medio-lateral parts becoming larger and sparser; intervals sparsely scattered with shallow, minute punctures, rather transversely micro-aciculate; base gently produced on each side; humeri weakly convex; apices weakly, roundly produced.

Male anal sternite feebly covered with isodiametric microsculpture, scattered with

minute punctures (each with a bent hair), subelliptically depressed and pubescent in apical part, truncate and haired at apex, whose lateral parts are noticeably raised and tufted. Legs medium-sized; male protibia curved ventrad, with ventral face weakly gouged and haired in apical 2/3; male metatibia almost straight but feebly twisted, with interior face gouged and haired in medial part, ratios of the lengths of pro-, meso- and metatarsomeres: 0.59, 0.28, 0.26 0.24, 1.36; 2.23, 0.99, 0.63, 0.38, 1.39; 2.46, 0.88, 0.41, 1.39.

Male genitalia elongated subfusiform, tapering apicad, 3.31 mm in length, 0.59 mm in width, strongly curved in lateral view; fused lateral lobes 1.76 mm in length, with apices strongly prolonged.

Body length: 20.3 mm.

Holotype: ♂, "Tonkin/Backan/P. Lemee/1907.08//MUSÉUM PARIS/1952/COLL. R. OBERTHUR" (MNHNP). Paratype: 1 ex., "MUSÉUM PARIS/TONKIN/REG DE HOA BINH/A. DE COOMAN, 1928".

Notes. This new species somewhat resembles *Strongylium taoi* MASUMOTO, 1996 from Thailand, but can be distinguished from the latter by the larger eyes (narrower interocular space), the pronotum more sparsely punctulate on the disc with a shallower median groove, the scutellum more weakly punctate, striae punctures on the elytra finer, and the male genitalia less strongly curved in lateral view.

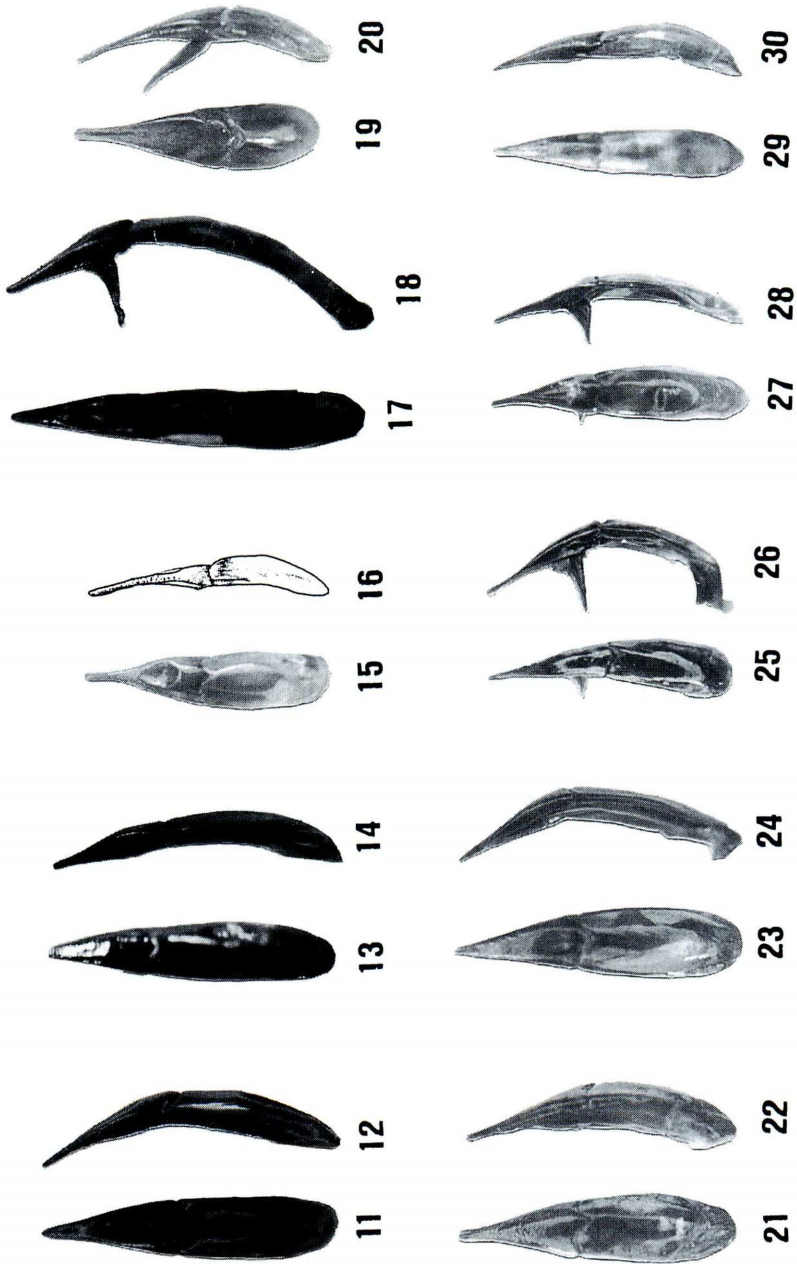
Strongylium harmandi sp. nov.

(Figs. 9, 27–28)

Brownish black with coppery lustre, mouth parts, major basal parts of femora and tarsi lighter in colour, hairs on ventral surface of tarsi yellowish brown; posterior part of head feebly shining, pronotum and scutellum moderately shining, elytra strongly, metallicly shining, ventral sides rather noticeably alutaceous and weakly with dark greenish reflection; each surface almost glabrous. Body subcylindrical.

Head subdecagonal, weakly covered with isodiametric microsculpture; clypeus rather transverse, gradually inclined anteriad, steeply bent ventrad in front, closely, finely punctulate, fronto-clypeal border gently curved and finely sulcate; genae obliquely subrhombical, gently raised outwards, scattered with small punctures, with obtuse outer margins; frons ridged in rather T-shape, steeply inclined anteriad, sparsely, coarsely punctate, with an impression at the medio-posterior part, diameter about 1/9 times the width of transverse diameter of an eye. Eyes rather large, subreniform in dor-

Figs. 11–30. Male genitalia. — 11–12, *S. schawallerianum* sp. nov., 11, dorsal view, 12, lateral view; 13–14, *S. yunnanatrum* sp. nov., 13, dorsal view, 14, lateral view; 15–16, *S. taliopacium* sp. nov., 15, dorsal view, 16, lateral view; 17–18, *S. lakhonense* sp. nov., 17, dorsal view, 18, lateral view; 19–20, *S. gaoliense* sp. nov., 19, dorsal view, 20, lateral view; 21–22, *S. fochouense* sp. nov., 21, dorsal view, 22, lateral view; 23–24, *S. stanislavium* sp. nov., 23, dorsal view, 24, lateral view; 25–26, *S. tonkinense* sp. nov., 25, dorsal view, 26, lateral view; 27–28, *S. harmandi* sp. nov., 27, dorsal view, 28, lateral view; 29–30, *S. kuvani* sp. nov., 29, dorsal view, 30, lateral view.



sal view, strongly convex laterad, obliquely, roundly inlaid into head. Antennae rather slender, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.72, 0.23, 1.37, 0.98, 1.12, 0.96, 0.79, 0.72, 0.69, 0.61, 0.67.

Pronotum trapezoidal in dorsal view (5:4), widest at the middle, feebly sinuous before base; apex sublinear, rimmed, the rim tapering and bordered laterad; base bisinuous, clearly bordered and boldly ridged, the ridge scattered with microscopic punctures and tapered laterad; sides gently convex laterad, steeply inclined ventrad, bordered from ventral parts by fine rims, which are invisible from above; front angles rounded, hind angles subrectangular in dorsal view; disc gently convex, partly, feebly covered with isodiametric microsculpture, rather closely, irregularly punctate, the punctures often approximate with one another, vaguely grooved along median line, with a pair of impressions at basal third. Scutellum triangular, gently elevated, weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures in lateral parts.

Elytra elongated subfusiform, 2.37 times as long as wide, 5.07 times the length and 1.67 times the width of pronotum, widest at apical 5/14; dorsum longitudinally convex, very weakly depressed in basal 1/4, also depressed in areas along scutellar striae; disc with rows of punctures, which are connected by fine striae in intero-basal parts, those in interior parts small and closely set, those in lateral parts becoming larger and coarser, forming elongate foveae; intervals very slightly convex, very weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures, transversely, shallowly aciculate; humeri gently swollen; apices rounded.

Male anal sternite weakly, subelliptically depressed in apical part, with rounded apex. Legs slender; protibia nearly straight, with ventral face feebly gouged and haired in apical 3/5; metatibia weakly twisted, gently gouged and haired in middle; ratios of the lengths of pro-, meso- and metatarsomeres: 0.38, 0.26, 0.24, 0.25, 1.22; 1.78, 0.77, 0.68, 0.52, 1.53: 2.27, 0.82, 0.66, 1.54.

Male genitalia subfusiform, 3.35 mm in length, 0.62 mm in width; fused lateral lobes subequilateral triangular, 1.48 mm in length, with strongly prolonged apices.

Body length: 17.5–20.5 mm.

Holotype: ♂, "MUSÉUM PARIS / Lakhon / HARMAND 1878" (MNHNP). Paratypes: 3 exs., same data as for the holotype.

Notes. This new species somewhat resembles *Strongylium dimidiatum* FAIRMAIRE, 1891 from China (Mou-pin) in general features, but can easily be distinguished from the latter by the dorsal surface more metallically shining, eyes larger and more closely approximate with each other, the pronotum more strongly punctate, the elytral punctures hardly striate, and the intervals not convex.

This new species belongs to the species-group of *Strongylium dimidiatum*, which contains *S. subaeneum* PIC, 1917, from Yunnan, *S. soncai* MASUMOTO, 1996, from Thailand, etc.

Strongylium kubani sp. nov.

(Figs. 10, 29–30)

Brownish black, dorsal surface with bronzy tinge, antennae, major parts of ventral side and legs dark brown, hairs on ventral surface of tarsi brownish yellow; head and pronotum sericeous, scutellum and elytra rather strongly, somewhat vitreously shining, ventral sides alutaceous; each surface almost glabrous. Body elongate and subcylindrical.

Head subdecagonal, covered with isodiametric microsculpture; clypeus rather transverse, weakly depressed near base, gradually inclined anteriorly, strongly bent ventrad in front, rather closely, irregularly punctate, fronto-clypeal border gently curved and very finely sulcate; genae obliquely, strongly raised outwards, rather closely scattered with small punctures, with rounded outer margins; frons ridged somewhat in X-shape, steeply inclined anteriorly, closely, irregularly punctate, with a rather rhombical impunctate impression at the medio-posterior part, diameter about 1/4 times the width of transverse diameter of an eye. Eyes subreniform in dorsal view, strongly convex laterally, obliquely, roundly inlaid into head. Antennae rather slender, reaching basal 1/4 of elytra, ratio of the length of each segment from base to apex: 0.62, 0.22, 1.38, 1.03, 1.10, 0.97, 0.82, 0.69, 0.64, 0.62, 0.63.

Pronotum short barrel-shaped and slightly wider than long (8:7) in dorsal view, widest at the middle, feebly sinuous before base, feebly covered with isodiametric microsculpture; apex feebly produced, finely bordered in lateral parts; base feebly sinuous in lateral parts, rather boldly bordered and ridged, the ridge aciculate on anterior slope and scattered with microscopic punctures on posterior slope; sides gently convex laterally, steeply declined to lateral margins, which are finely rimmed and visible from above; front angles rounded, hind angles weakly angulate in dorsal view; disc gently convex, rather closely, irregularly punctate, the punctures shallow, often approximate with one another, vaguely grooved along median line in posterior half, with a pair of oblique impressions close to base. Scutellum linguiform, elevated, very weakly covered with isodiametric microsculpture, very sparsely shallowly scattered with microscopic punctures, and irregularly, weakly aciculate.

Elytra elongated subfusiform, 2.17 times as long as wide, 4.55 times the length and 1.78 times the width of pronotum, widest at apical 1/3; dorsum longitudinally convex, very weakly depressed in basal 1/8, highest at basal 1/3; disc with rows of ovate or elongated punctures, which are connected by fine striae in basal parts, those in interior parts small and closely set, those in lateral parts becoming larger and sparser, forming elongated foveae; intervals convex in anterior part, almost flat in posterior part, very weakly covered with isodiametric microsculpture, sparsely scattered with microscopic punctures and aciculate in anterior part, punctures and aciculation diminishing in posterior part; humeri rather strongly swollen; apices weakly produced and very slightly dehiscent.

Male anal sternite weakly, subelliptically depressed in apical part, finely pubes-

cent, with rounded apex. Legs slender; protibia nearly straight, with ventral face feebly gouged and haired in apical 3/5; metatibiae feebly curved, with interior face very slightly gouged and haired in middle; ratios of the lengths of pro-, meso- and metatarsomeres: 0.62, 0.34, 0.37, 0.36, 1.37; 2.09, 0.98, 0.88, 0.57, 1.47: 2.47, 1.13, 0.69, 1.64.

Male genitalia elongated fusiform, 3.32 mm in length, 0.48 mm in width; fused lateral lobes subequilateral triangular, 1.53 mm in length, with gently prolonged apices.

Body length: 18.5–20.5 mm.

Holotype: ♂, “YUNNAN 1500–2000 m / 25.22N 98.49E 17–24/5 / GAOLIGONG mts. / Vít Kubán leg. 1995 // coll. S. BEČVÁŘ” (NMNHP). Paratypes: 1 ex., “YUNNAN 2800–3000 m / 25.12N 100.24E / WEIBAOSHAN mts. / 29–30/6.92 / Vít Kubán leg. // coll. S. BEČVÁŘ”; 3 exs., “YUNNAN 2000–2800 m / 25.11 N 100.24E / WEIBAOSHAN mts. / W slope 25–28/6.92 / Vít Kubán leg.”

Notes. This new species resembles *Strongylium harmandi* sp. nov., but can be distinguished from the latter by the interocular space wider, the pronotum obviously sericeous and more finely punctate, the scutellum linguiform, the elytra more strongly grooved with intervals more strongly convex in the anterior parts, and the male genitalia slenderer.

This new species also belongs to the species-group of *Strongylium dimidiatum*.

要 約

益本仁雄：アジア産ナガキマワリ族 (*Strongyliini*) の研究. XV. 東南アジア産ナガキマワリ属 (*Strongylium*) について. — アジア産ナガキマワリ族 (*Strongyliini*) 研究の第15回として, 東南アジア産のナガキマワリ属 (*Strongylium*) を取り上げた. 10種の新種を記載し, それぞれ *Strongylium schawallerianum* sp. nov., *S. yunnanatrum* sp. nov., *S. taliopacium* sp. nov., *S. lakho-nense* sp. nov., *S. gaoliense* sp. nov., *S. foochouense* sp. nov., *S. stanislavium* sp. nov., *S. tonkinense* sp. nov., *S. harmandi* sp. nov., および *S. kuvani* sp. nov. と命名した.

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